

AMENDMENT TO THE CLAIMS:

The following claim set replaces all prior versions, and listings, of claims in the application:

1. (currently amended) Process for the production of melamine using a furnace that is operated with a fuel resulting in flue gases, the process comprising:
 - (1) providing a salt furnace as part of a melamine production process, the salt furnace combusting a fuel thereby resulting in flue gases,
 - (2) [[(1)]] a first heat exchange step in which the flue gases are heat exchanged with a ~~first process stream~~ molten salt from the melamine production process to form a heated molten salt that provides process heat for the melamine production process,
 - (3) [[(2)]] a second heat exchange step after the first heat exchange step wherein the flue gases ~~discharged from the first heat exchange step~~ are subsequently heat exchanged with a second process stream ~~from the melamine production process,~~ [[and]]
 - (4) [[(3)]] a third heat exchange step wherein the flue gases ~~discharged from the second heat exchange step~~ are heat exchanged with fresh air so as to provide heated fresh air, and
 - (5) directing the heated fresh air to the salt furnace for use as combustion air.
- 2.-3. (canceled)
4. (currently amended) Process according to claim ~~[[3]]~~ 1, wherein ~~in the first heat exchange step the flue gases exchange heat with molten salt, and wherein in the second heat exchange step the flue gases exchange heat with a the second process stream which consists essentially of ammonia.~~

5. (currently amended) Process according to claim ~~[[3]]~~ 1, wherein ~~in the first heat exchange step the flue gases exchange heat with molten salt, and wherein in the second heat exchange step the flue gases exchange heat with a~~ the second process stream which consists essentially of urea.
6. (previously presented) Process according to claim 1, further comprising: ~~[[4]]~~
(6) a fourth heat exchange step in which a fourth process stream is heat exchanged with the flue gases discharged from the third heat exchange step, wherein the fourth process stream which is supplied to the fourth heat exchange step has a higher temperature than the flue gases which are discharged from the third heat exchange step and supplied to the fourth heat exchange step.
7. (previously presented) Apparatus for the production of melamine comprising:
a salt furnace operated by combustion and producing flue gases, the salt furnace further including a first heat exchange unit in which a molten salt employed in a melamine production process is heated so as to provide heated molten salt which serves as a process heat supply in ~~[[a]]~~ the melamine production process for the production of melamine, wherein the apparatus includes,
a second heat exchange unit which receives flue gases discharged from the first heat exchange unit so as to directly or indirectly ~~[[heats]]~~ a process stream from the melamine production process, and
a third heat exchange unit which receives and heat exchanges ~~is in contact with~~ the flue gases discharged from the second heat exchange unit with fresh air to provide heated fresh air, and
a supply line to supply the heated fresh air to the salt furnace for use a combustion air therein.

8. (previously presented) Apparatus according to claim 7, wherein the second heat exchange unit directly heats a process stream which consists essentially of ammonia or urea.
9. (currently amended) Apparatus according to claim 7, ~~wherein further comprising~~ a line which directs a portion of the heated molten salt discharged from the first heat exchange unit to the [[third]] fourth heat exchange unit so as to be heat exchanges exchanged with the flue gases received by the fourth heat exchange unit from the third heat exchange unit with fresh air.
10. (currently amended) Process for optimizing an existing apparatus ~~supplying for the supply of~~ process heat from flue gases in a melamine production process for the production of melamine, the process comprising:
adding a second heat exchange unit downstream of a first heat exchange unit wherein combustion flue gases from a salt furnace of the melamine production process are heat-exchanged with molten salt to provide heated molten salt that provides process heat in the melamine production process, the second heat exchange unit receiving flue gases discharged by the first heat exchange unit for the direct or indirect heating of [[a]] another process stream in the melamine production process, [[and]]
adding a third heat exchange unit downstream of the second heat exchange unit to receive flue gases discharged by the second heat exchange unit for heating fresh air, ~~and wherein both the second and third heat exchange units are in contact with the flue gases.~~
directing heated fresh air from the second heat exchange unit to the salt furnace for use as combustion air therein.

11. (previously presented) Process according to claim 10, in which the added second heat exchange unit is used for the direct heating of a process stream which consists essentially of ammonia or urea.
12. (new) A process according to claim 10, further comprising adding a fourth heat exchange unit downstream of the third heat exchange unit in which a fourth process stream in the melamine production process is heat exchanged with the flue gases discharged from the third heat exchange unit, wherein the fourth process stream which is supplied to the fourth heat exchange unit has a higher temperature than the flue gases which are discharged from the third heat exchange step and supplied to the fourth heat exchange step.
13. (new) A process as in claim 12, wherein the fourth process stream includes a portion of the heated molten salt discharged from the first heat exchange unit.
14. (new) A process as in claim 6, wherein the fourth process stream includes a portion of the heated molten salt discharged from the first heat exchange step.
15. (new) Apparatus according to claim 7, further comprising a fourth heat exchange unit which receives and heat exchanges flue gases discharged from the third heat exchange unit.